Power BI

in 30 days

DAY 1

Introduction to Power BI

🗂️ Resources for Learning

- Microsoft Learn: Introduction to Power BI
- YouTube Tutorial: Getting Started with Power BI

🎯 Practice Questions

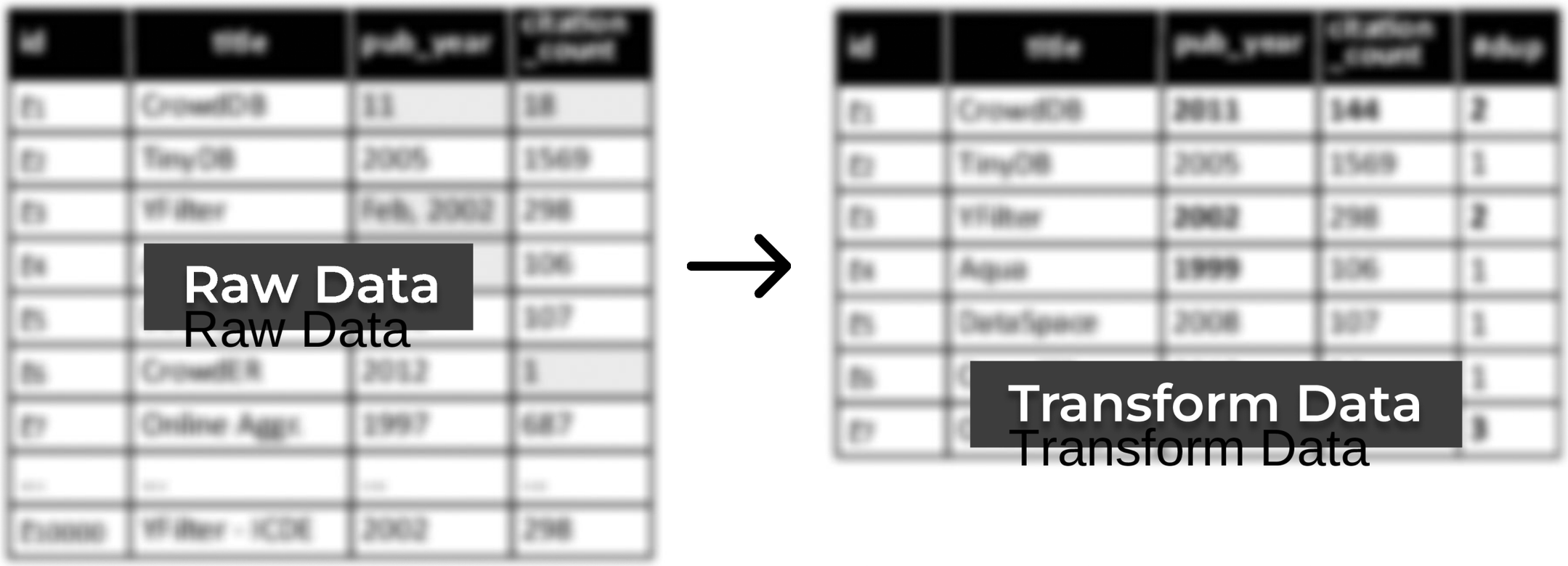
- Download and install Power BI Desktop on your computer.
- Create a new Power BI report.
- Import a simple Excel dataset (e.g., sales data) into Power BI.

📆 Project for the Day

- Create a basic sales report using the imported Excel dataset.
- Add a bar chart to visualize total sales by product category.
- Format the visuals and explore the options in Power BI Desktop.

DAY 2

Data Transformation and Cleaning



🗂️ Resources for Learning

- Microsoft Learn: Transform data with Power Query
- YouTube Tutorial: Data Transformation in Power BI

🎯 Practice Questions

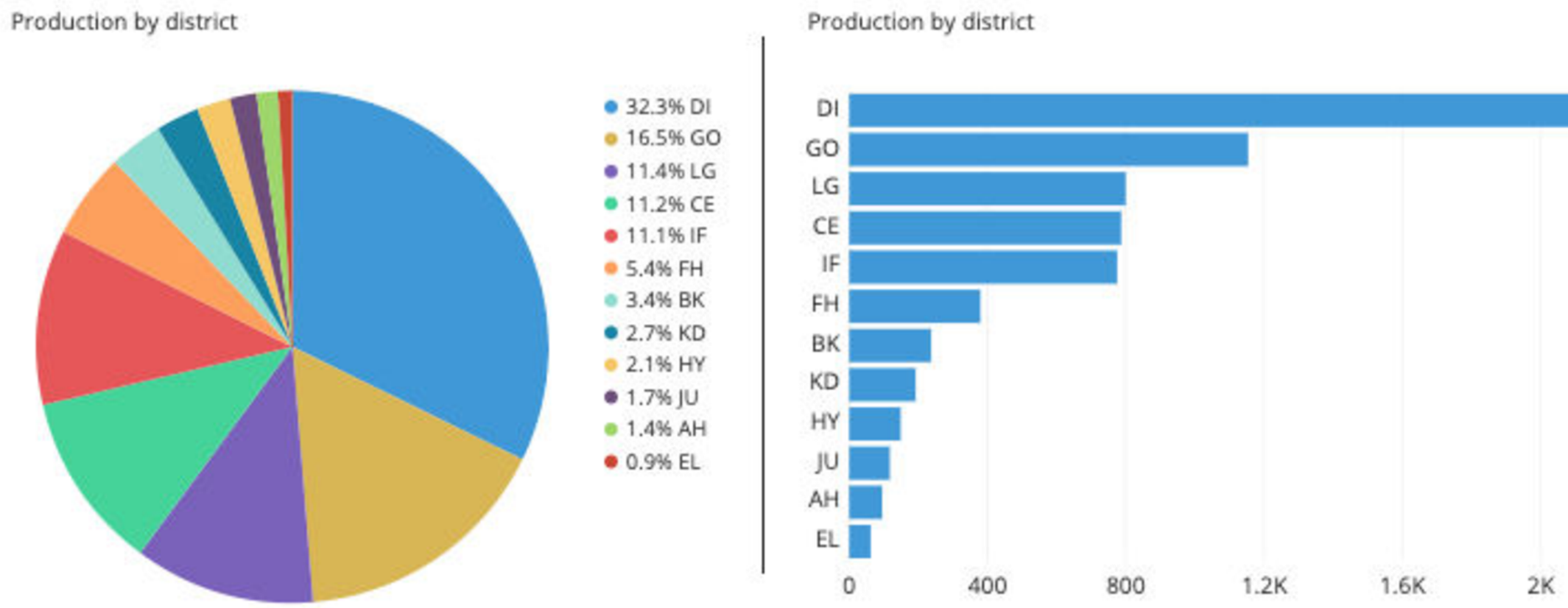
- Load a CSV dataset (e.g., customer data) into Power BI.
- Use Power Query to filter and clean the data (remove duplicates, null values, etc.).

🗓️ Project for the Day

- Import a CSV dataset with customer information.
- Clean the data using Power Query by removing duplicates and null values.
- Create a new column to calculate the age of customers based on their birthdates.

DAY 3

Basic Data Visualization



🗂️ Resources for Learning

- Microsoft Learn: Create your first Power BI report
- YouTube Tutorial: Basic Data Visualization in Power BI

🎯 Practice Questions

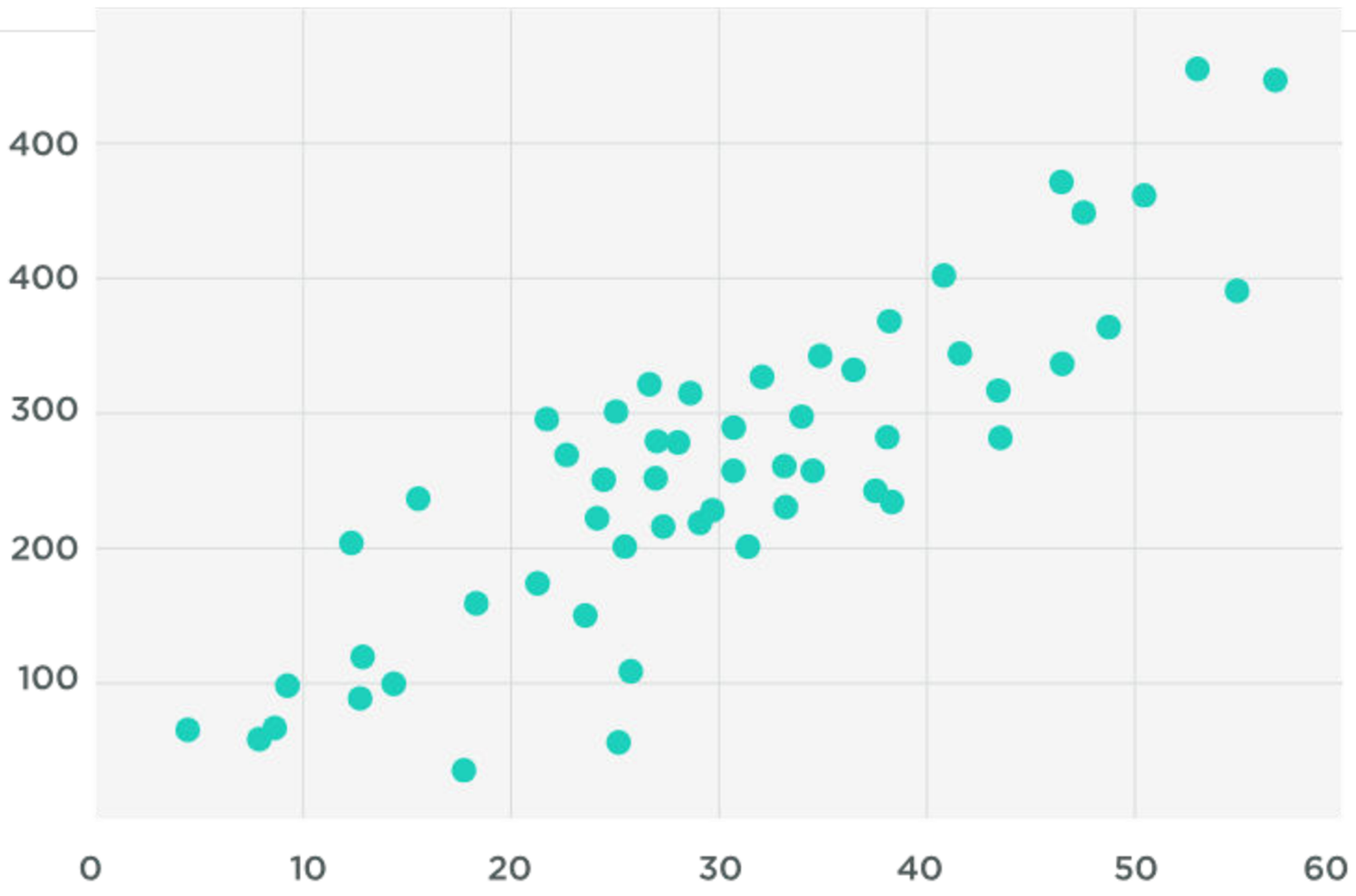
- Create a column chart to display product-wise sales.
- Add a pie chart to visualize the distribution of sales by region.

🗓️ Project for the Day

- Use the cleaned customer dataset from Day 2.
- Create a column chart to display the distribution of customers by age groups.
- Add a pie chart to show the distribution of customers by gender.

DAY 4

Exploratory Data Analysis



🗂️ Resources for Learning

- Microsoft Learn: Explore your data with Power BI
- YouTube Tutorial: Exploratory Data Analysis in Power BI

🎯 Practice Questions

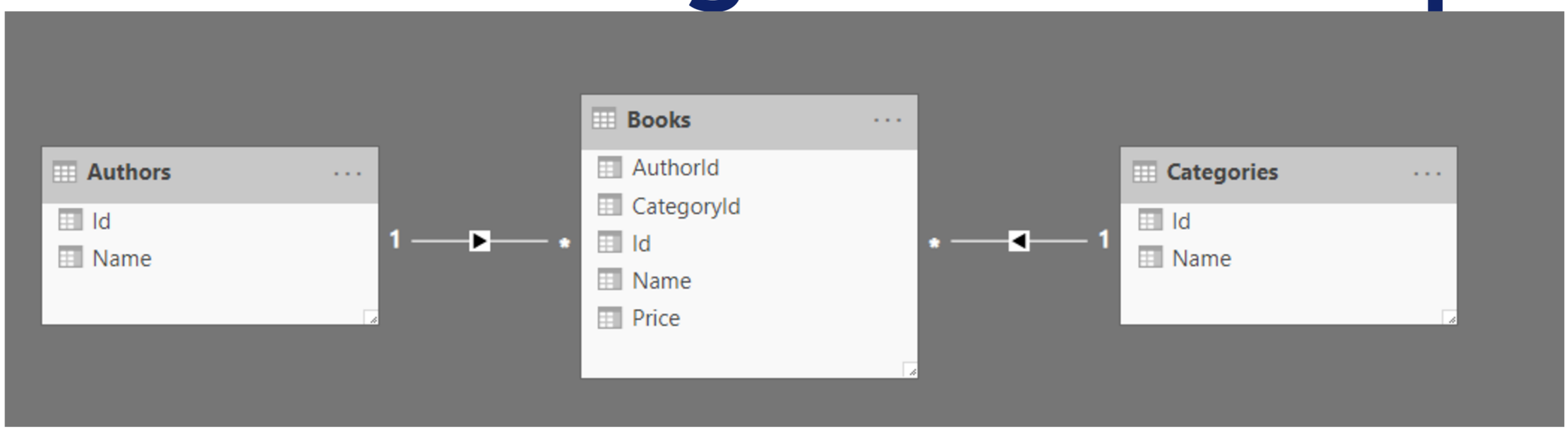
- Create a scatter plot to visualize the relationship between price and sales.
- Build a line chart to show the trend of monthly sales over time.

🗓️ Project for the Day

- Use the sales data from Day 1 or Day 3.
- Create a scatter plot to explore the relationship between price and sales volume.
- Build a line chart to visualize the monthly sales trends over the past year.

DAY 5

Data Modeling & Relationships



🗂️ Resources for Learning

- Microsoft Learn: Create relationships in Power BI Desktop
- YouTube Tutorial: Data Modeling and Relationships in Power BI

🎯 Practice Questions

- Import a new dataset (e.g., orders data) and create relationships with existing tables.
- Use RELATED and RELATEDTABLE functions in DAX to retrieve related data.

🗓️ Project for the Day

- Import an orders dataset with information about customer orders.
- Create a relationship between the sales and orders tables based on a common field (e.g., customer ID).
- Build a report that combines sales and orders data, and visualize customer-related insights.

DAY 6

Advanced Data Visualization

Region Sales Stage	Central Opportunity Count	Revenue	East Opportunity Count	Revenue	West Opportunity Count	Revenue	**Total Opportunity Count**	**Revenue**
Lead								
Small	26	$22,907,676	38	$47,428,906	11	$11,889,018	**75**	**$82,225,600**
Medium	25	$96,249,147	30	$116,539,256	18	$72,871,697	**73**	**$285,660,100**
Large	40	$321,876,492	33	$255,568,275	18	$149,636,713	**91**	**$727,081,480**
Total	**91**	**$441,033,315**	**101**	**$419,536,437**	**47**	**$234,397,428**	239	$1,094,967,180
Qualify								
Small	10	$11,550,016	19	$23,925,214	5	$5,695,989	**34**	**$41,171,219**
Medium	12	$48,820,525	19	$71,617,016	8	$33,018,968	**39**	**$153,456,509**
Large	7	$51,344,920	12	$100,149,924	2	$13,727,406	**21**	**$165,222,250**
Total	**29**	**$111,715,461**	**50**	**$195,692,154**	**15**	**$52,442,363**	94	$359,849,978
Solution								
Small	13	$13,771,741	8	$10,283,935	7	$7,155,493	**28**	**$31,211,169**
Medium	9	$38,048,946	13	$54,729,272	4	$16,363,417	**26**	**$109,141,635**
Large	7	$48,923,102	9	$69,333,963	4	$29,922,591	**20**	**$148,179,656**
Total	**29**	**$100,743,789**	**30**	**$134,347,170**	**15**	**$53,441,501**	74	$288,532,460
Proposal								
Small	8	$13,095,186	3	$4,770,862	3	$3,720,287	**14**	**$21,586,335**
Medium	4	$15,283,161	6	$25,607,581	5	$21,456,937	**15**	**$62,347,679**
Large	2	$18,344,522	4	$29,592,481	2	$17,855,445	**8**	**$65,792,448**
Total	**14**	**$46,722,869**	**13**	**$59,970,924**	**10**	**$43,032,669**	37	$149,726,462
Finalize								
Small	1	$1,788,307	1	$1,693,585			**2**	**$3,481,892**
Medium	2	$8,974,009			2	$7,926,517	**4**	**$16,900,526**
Large	2	$12,539,930	4	$29,002,843	2	$13,249,668	**8**	**$54,792,441**
Total	**5**	**$23,302,246**	**5**	**$30,696,428**	**4**	**$21,176,185**	14	$75,174,859
Total	**168**	**$723,517,680**	**199**	**$840,243,113**	**91**	**$404,490,146**	458	$1,968,250,939

🗂️ Resources for Learning

- Microsoft Learn: Enhance your report with Power BI visuals
- YouTube Tutorial: Advanced Data Visualization in Power BI

🎯 Practice Questions

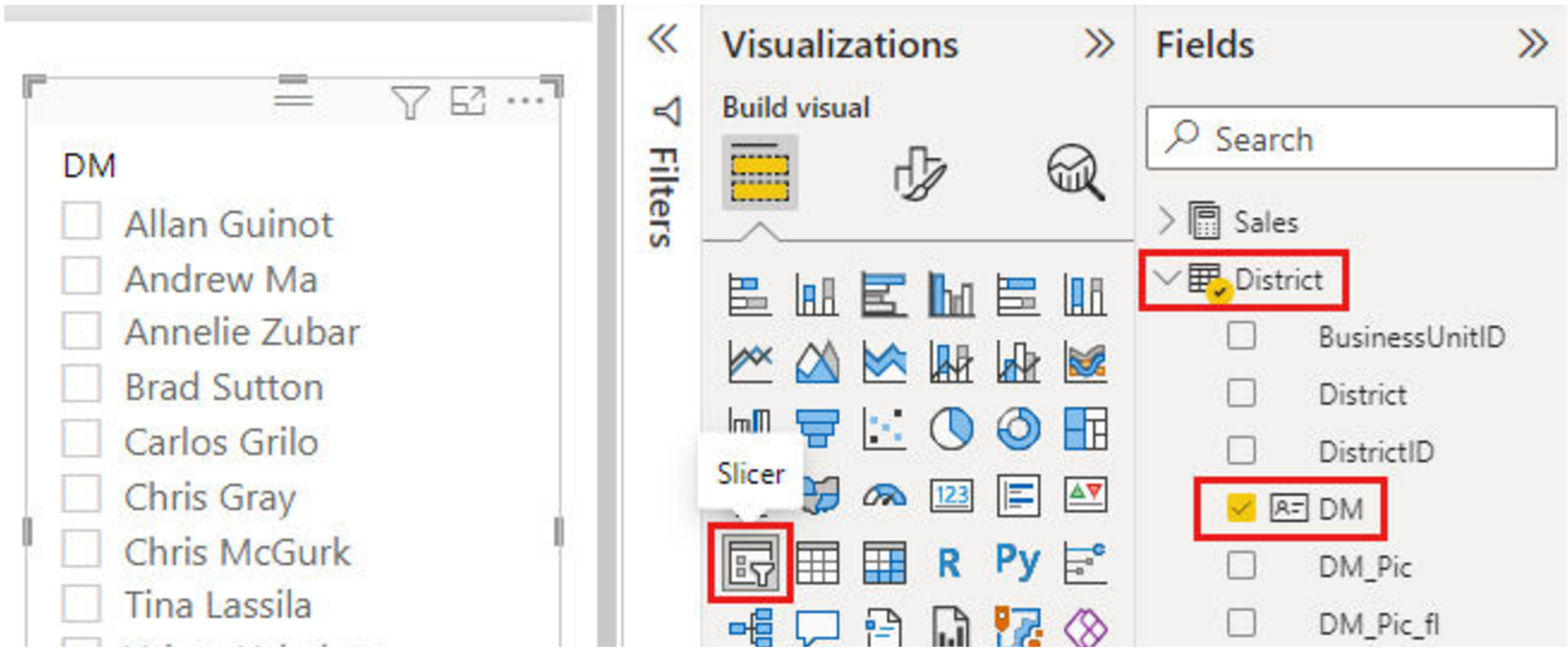
- Use a matrix visualization to show cross-tabulated data.
- Create a card visualization to display the total sales for a specific category.

🗓️ Project for the Day

- Use the combined sales and orders data from Day 5.
- Create a matrix visualization to display the relationship between customers and their orders.
- Add a card visualization to show the total revenue for a specific customer.

DAY 7

Data Insights & Storytelling



🗂️ Resources for Learning

- Microsoft Learn: Create a data-driven story with Power BI
- YouTube Tutorial: Data Storytelling in Power BI

🎯 Practice Questions

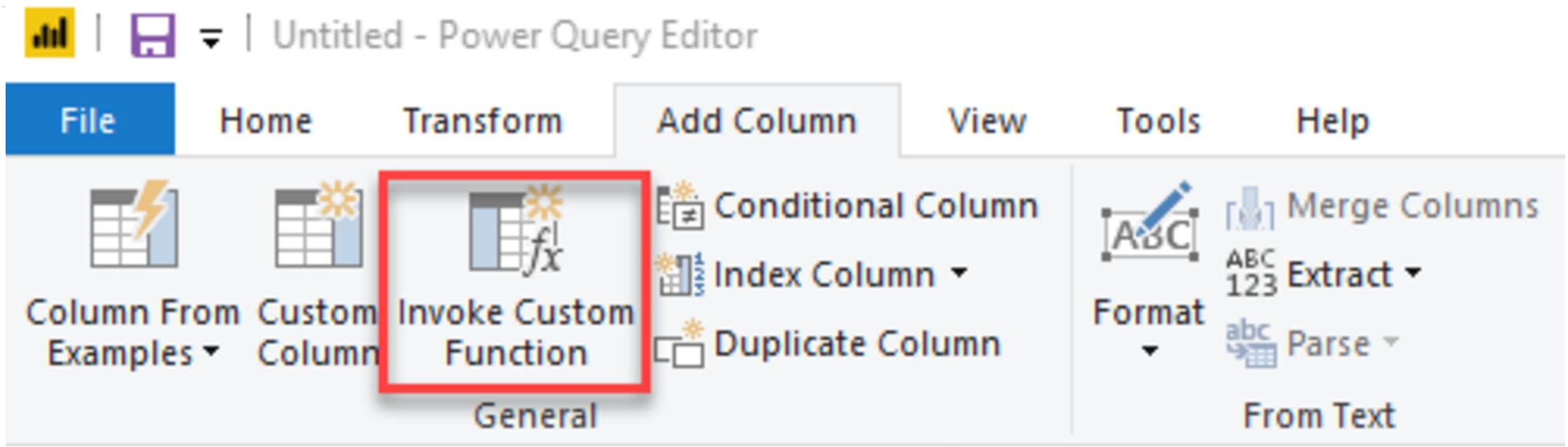
- Create a slicer to filter data and highlight insights.
- Use bookmarks to create interactive presentations.

🗓️ Project for the Day

- Use the sales and orders dataset from Day 5.
- Create a slicer to allow users to filter data by specific time periods.
- Build a series of visuals to showcase the impact of promotions on sales over time.
- Use bookmarks to create an interactive presentation that tells a data-driven story.

DAY 8

Introduction to Power Query Functions



🗂️ Resources for Learning

- Microsoft Learn: Get started with Power Query functions
- YouTube Tutorial: Introduction to Power Query Functions

🎯 Practice Questions

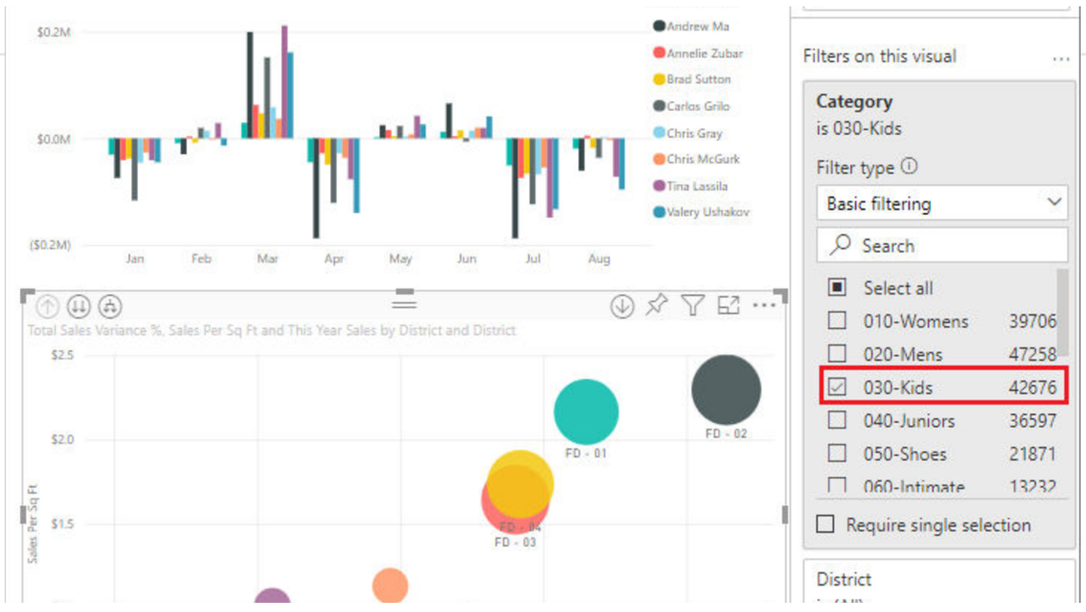
- Create a custom column using a simple Power Query function.
- Use a built-in Power Query function to transform text data.

🗓️ Project for the Day

- Use the sales dataset from Day 1 or Day 3.
- Create a custom column that calculates the total revenue for each product based on price and quantity sold.
- Use the UPPER function to transform the product names to uppercase.

DAY 9

Power Query Parameters & Advanced Transformations



📁 Resources for Learning

- Microsoft Learn: Use parameters in Power BI Desktop
- YouTube Tutorial: Power Query Parameters and Advanced Transformations

🎯 Practice Questions

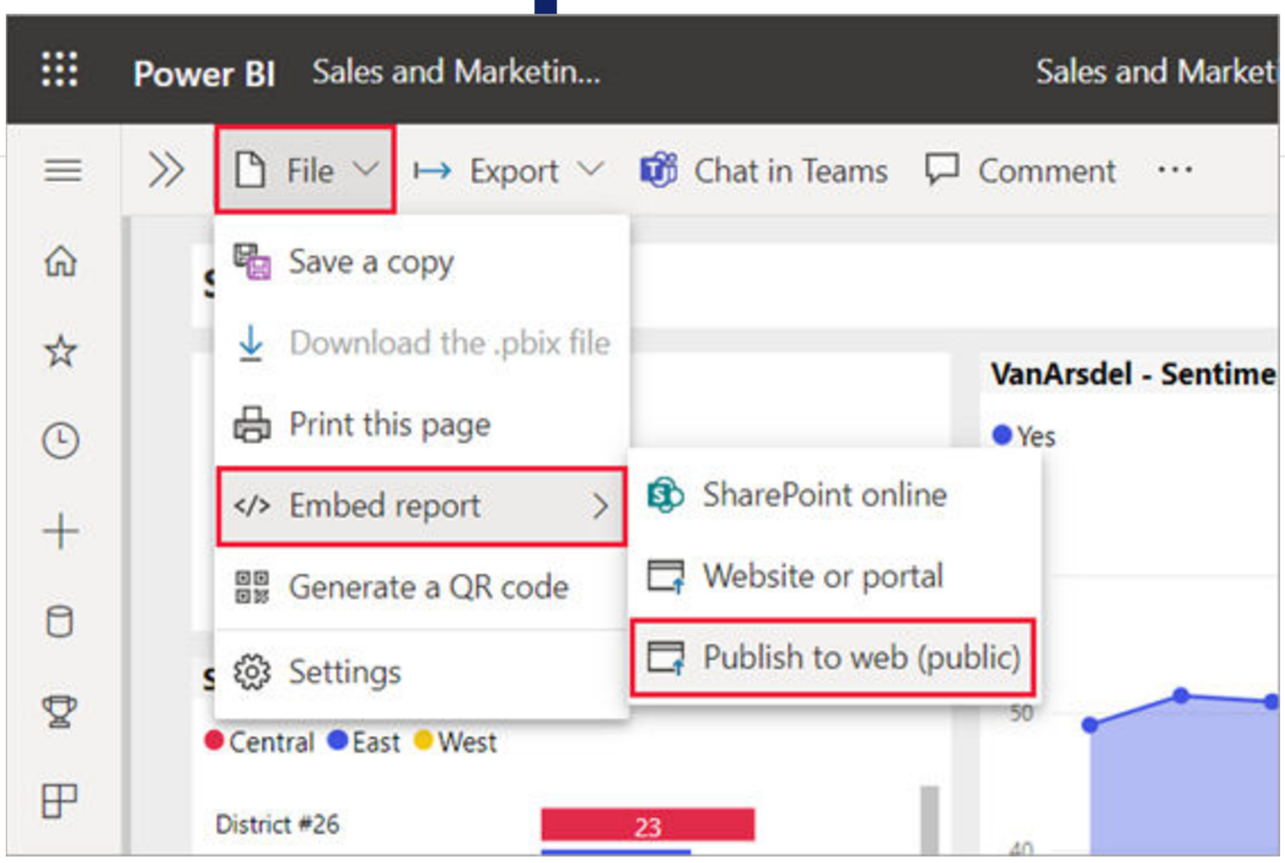
- Use a parameter to filter data based on a specific product category.
- Create a parameterized query to load data dynamically.

🗓️ Project for the Day

- Import a new dataset containing product categories and subcategories.
- Use a parameter to allow users to select a specific category and filter the data accordingly.
- Create a parameterized query to load sales data based on user input for a particular year.

DAY 10

Publishing and Sharing Power BI Reports



🗂️ Resources for Learning

- Microsoft Learn: Publish a Power BI Desktop file
- YouTube Tutorial: Publishing and Sharing Power BI Reports

🎯 Practice Questions

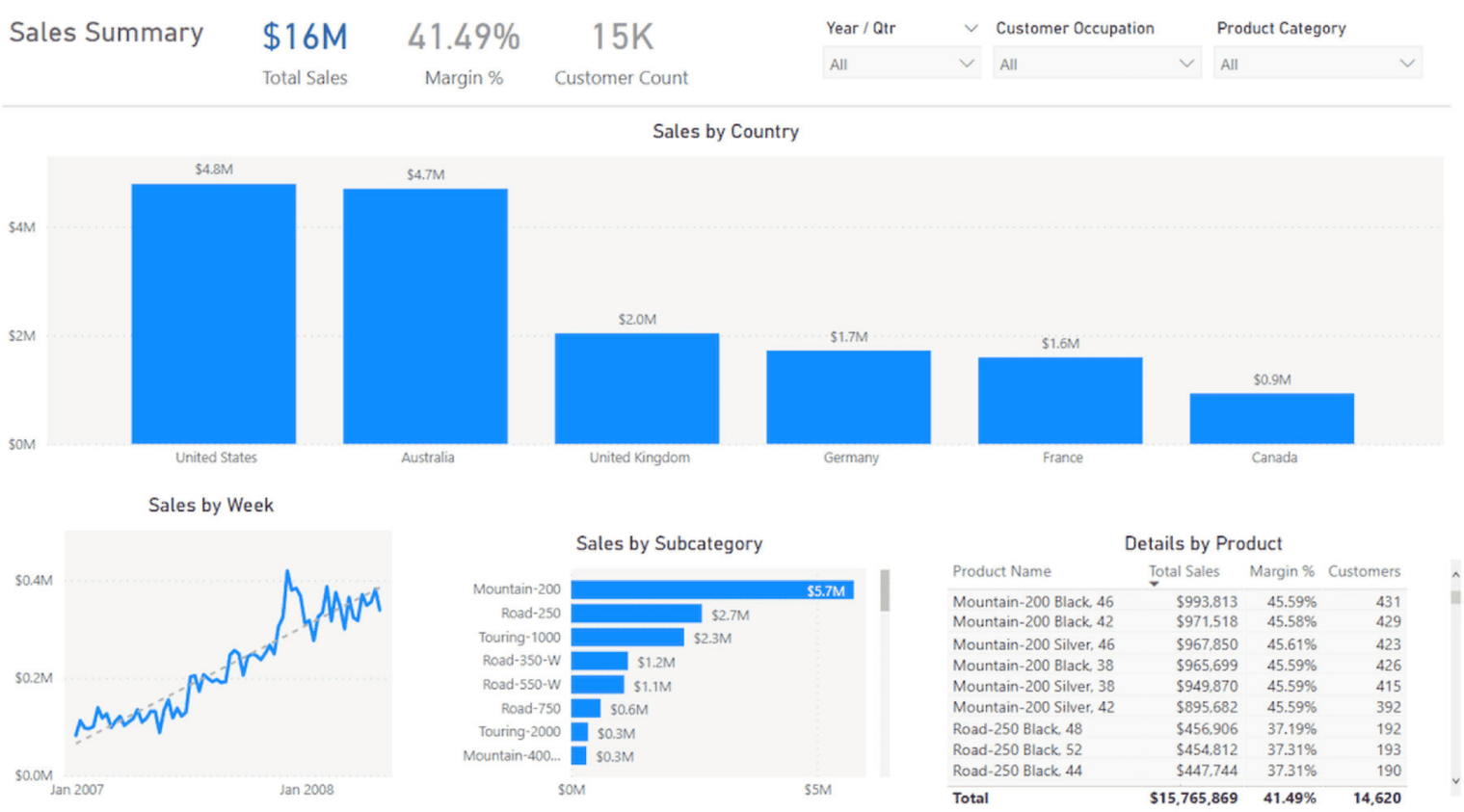
- Publish a report to the Power BI service.
- Share a report with a colleague and assign them specific access permissions.

🗓️ Project for the Day

- Use any of the completed reports from the previous days.
- Publish your report to the Power BI service.
- Share the published report with a colleague and grant them view access.
- Explore the sharing options, including embedding and sharing links.

DAY 11

Understanding Power BI's Mobile Reports



🗂️ Resources for Learning

- Microsoft Learn: Create reports optimized for mobile devices
- Power BI Blog: Power BI Mobile App Features

🎯 Practice Questions

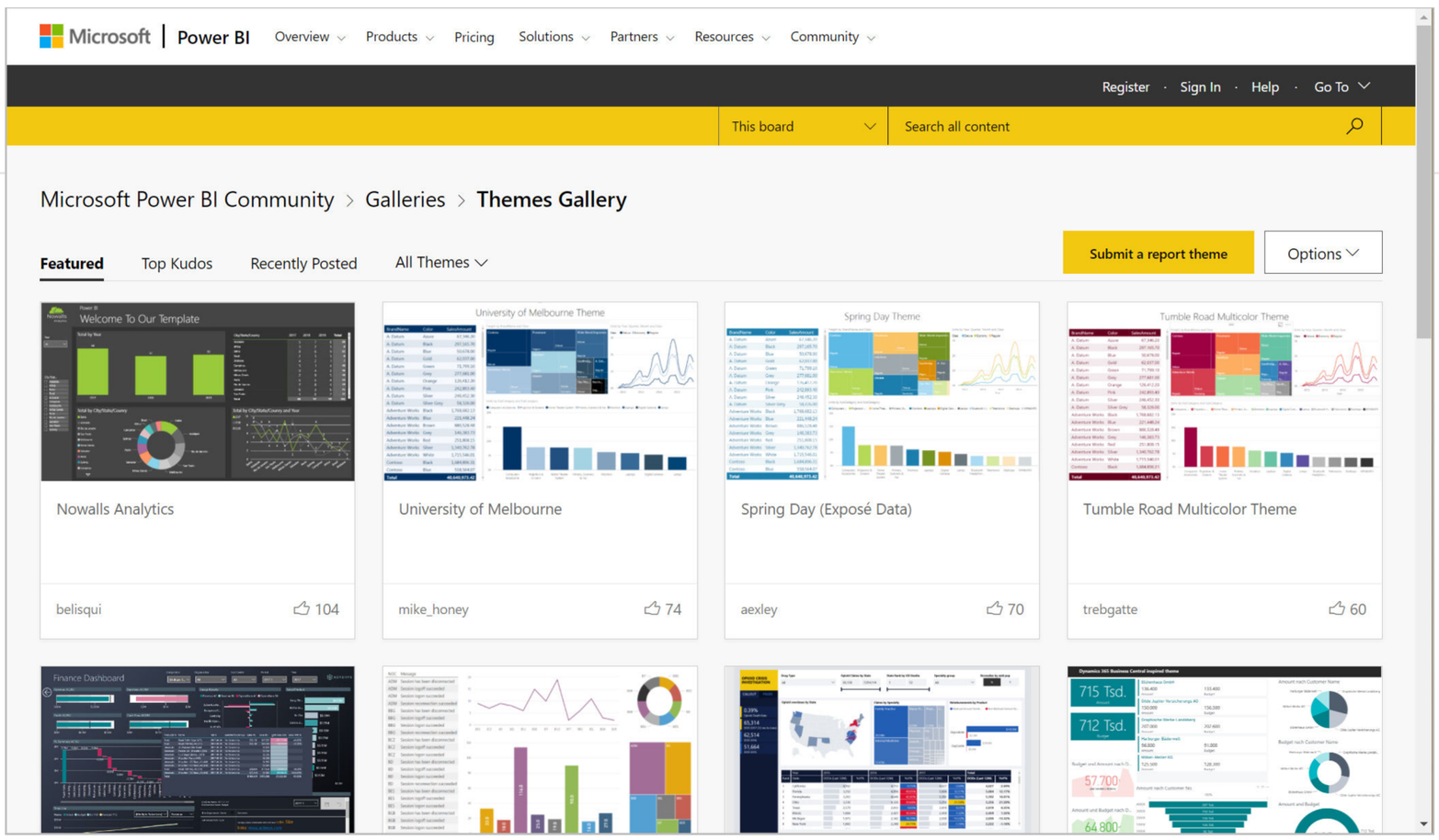
- Design a report layout optimized for mobile devices, considering responsive design principles.
- Test the report layout using Power BI's mobile app.

🗓️ Project for the Day

- Use the sales and orders dataset from Day 5.
- Create a mobile-optimized version of your dashboard, focusing on key insights and visualizations.
- Test the mobile layout on your smartphone to ensure it's responsive and user-friendly.

DAY 12

Exploring Power BI's Report Themes



🗂️ Resources for Learning

- Microsoft Learn: Customize the look of a report with themes
- Power BI Community Blog: Creating and Using Custom Themes

🎯 Practice Questions

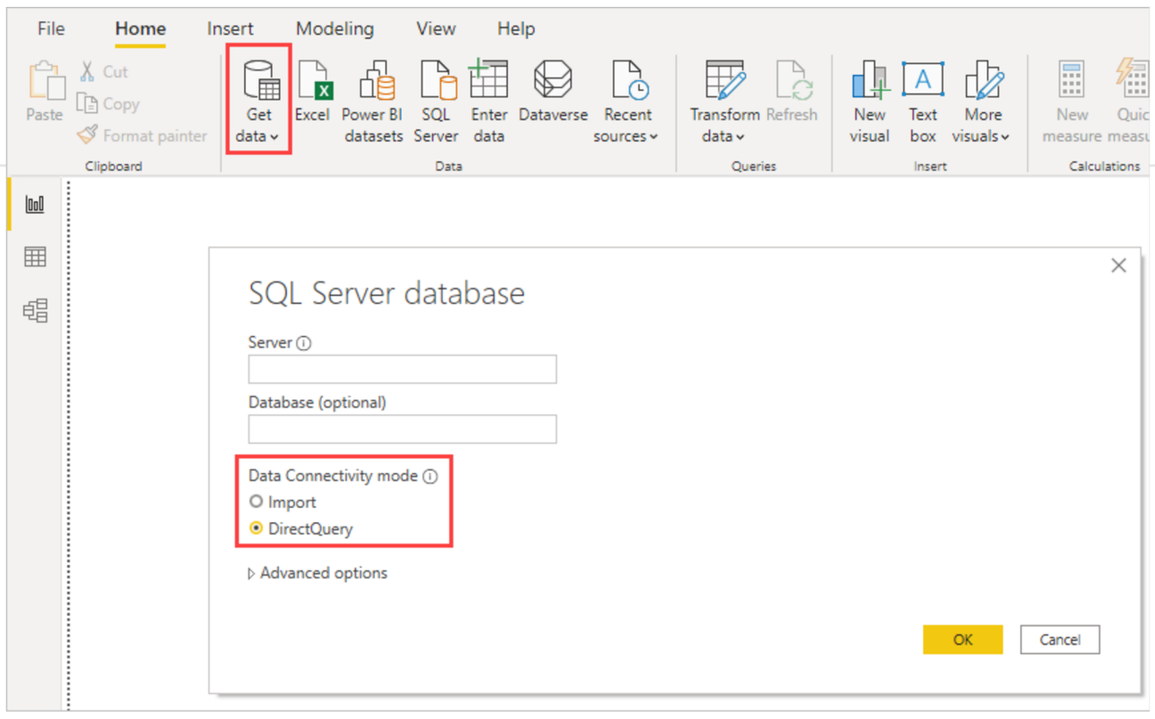
- Apply a custom theme to your dashboard and adjust colors, fonts, and other styling elements.

🗓️ Project for the Day

- Choose any of the completed reports from the previous days.
- Apply a custom theme to your dashboard to give it a unique and professional look.
- Experiment with different color schemes, fonts, and styles to match your branding.

DAY 13

Learning about Power BI's DirectQuery and Live Connection



🗂️ Resources for Learning

- Microsoft Learn: Use DirectQuery in Power BI
- Microsoft Learn: Use a live connection to Power BI data

🎯 Practice Questions

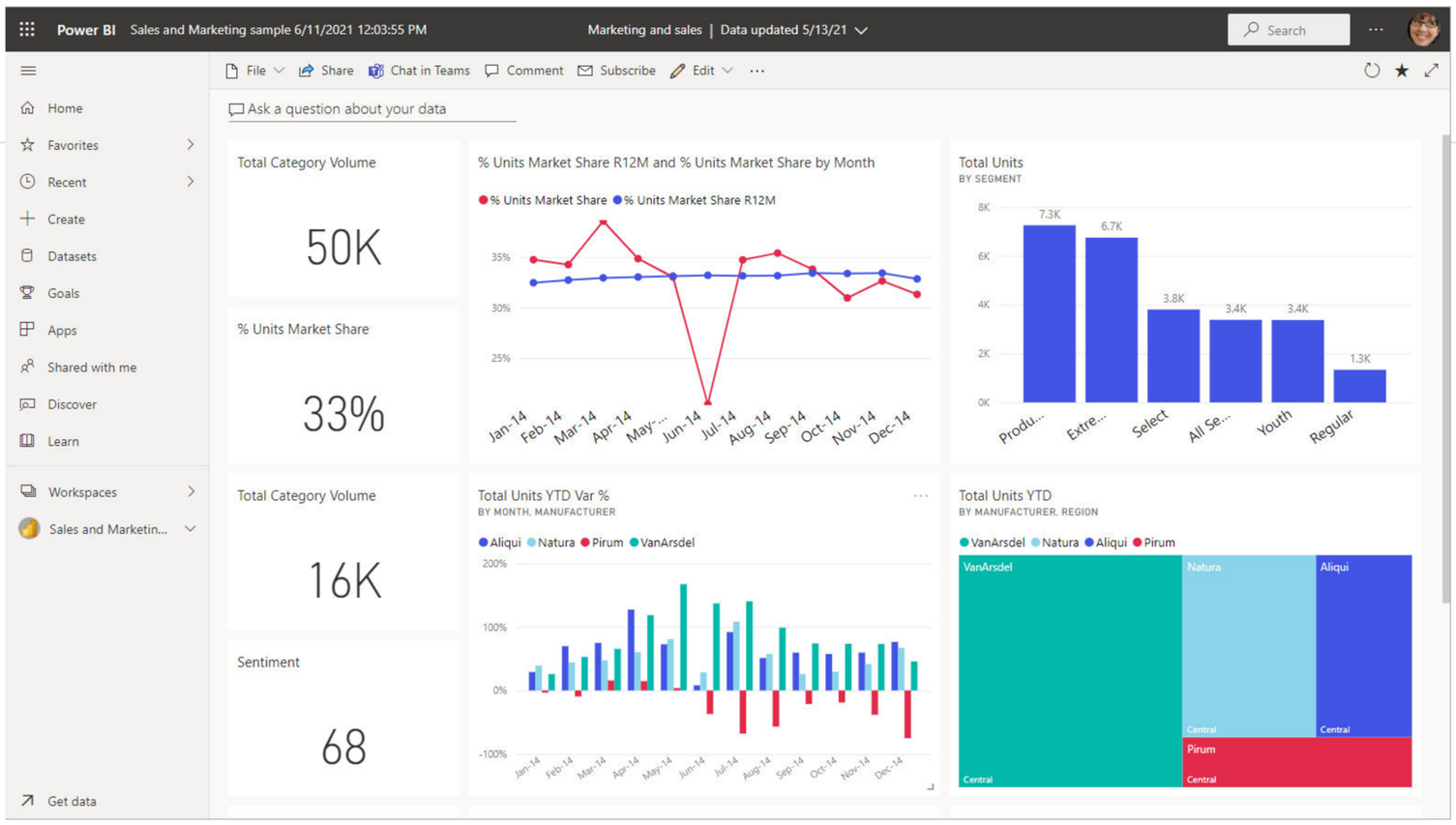
- Connect your dashboard to a data source using DirectQuery or a live connection.

🗓️ Project for the Day

- Use any of the completed reports from the previous days.
- Create a connection to a live data source (e.g., a SQL database) and build visualizations that update in real time.
- Test the real-time data interaction by making changes to the source data and observing the impact on your visuals.

DAY 14

Understanding Power BI's R Integration



🗂️ Resources for Learning

- Microsoft Learn: Use R scripts in Power BI Desktop
- R Documentation: Introduction to R

🎯 Practice Questions

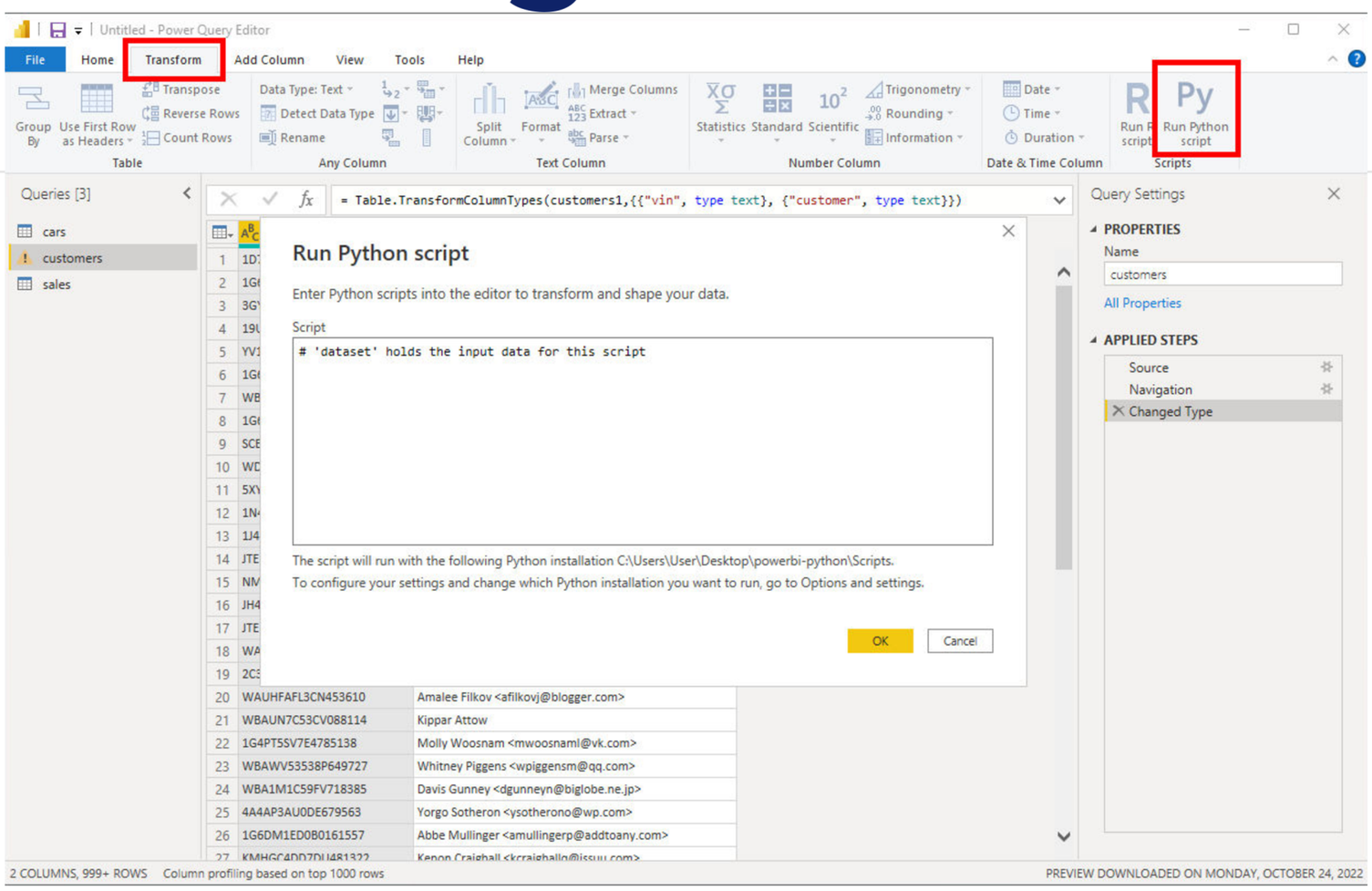
- Write a simple R script to perform data analysis or visualization within Power BI.

🗓️ Project for the Day

- Use any of the completed reports from the previous days.
- Integrate an R script into your dashboard to perform a specific data analysis task.
- For example, you could use R to create a custom visualization or calculate advanced statistical measures.

DAY 15

Learning about Power BI's Python Integration



📁 Resources for Learning

- Microsoft Learn: Use Python scripts in Power BI Desktop
- Python Documentation: Python Tutorial

🎯 Practice Questions

- Write a Python script to perform data analysis or visualization within Power BI.

🗓️ Project for the Day

- Use any of the completed reports from the previous days.
- Integrate a Python script into your dashboard to perform a specific data analysis task.
- For example, you could use Python to create interactive visualizations using libraries like Matplotlib or Seaborn.

DAY 16

Understanding Power BI's Row-Level Security

🗂️ Resources for Learning

- Microsoft Learn: Implement row-level security in Power BI
- Power BI Blog: Dynamic Row-Level Security

🎯 Practice Questions

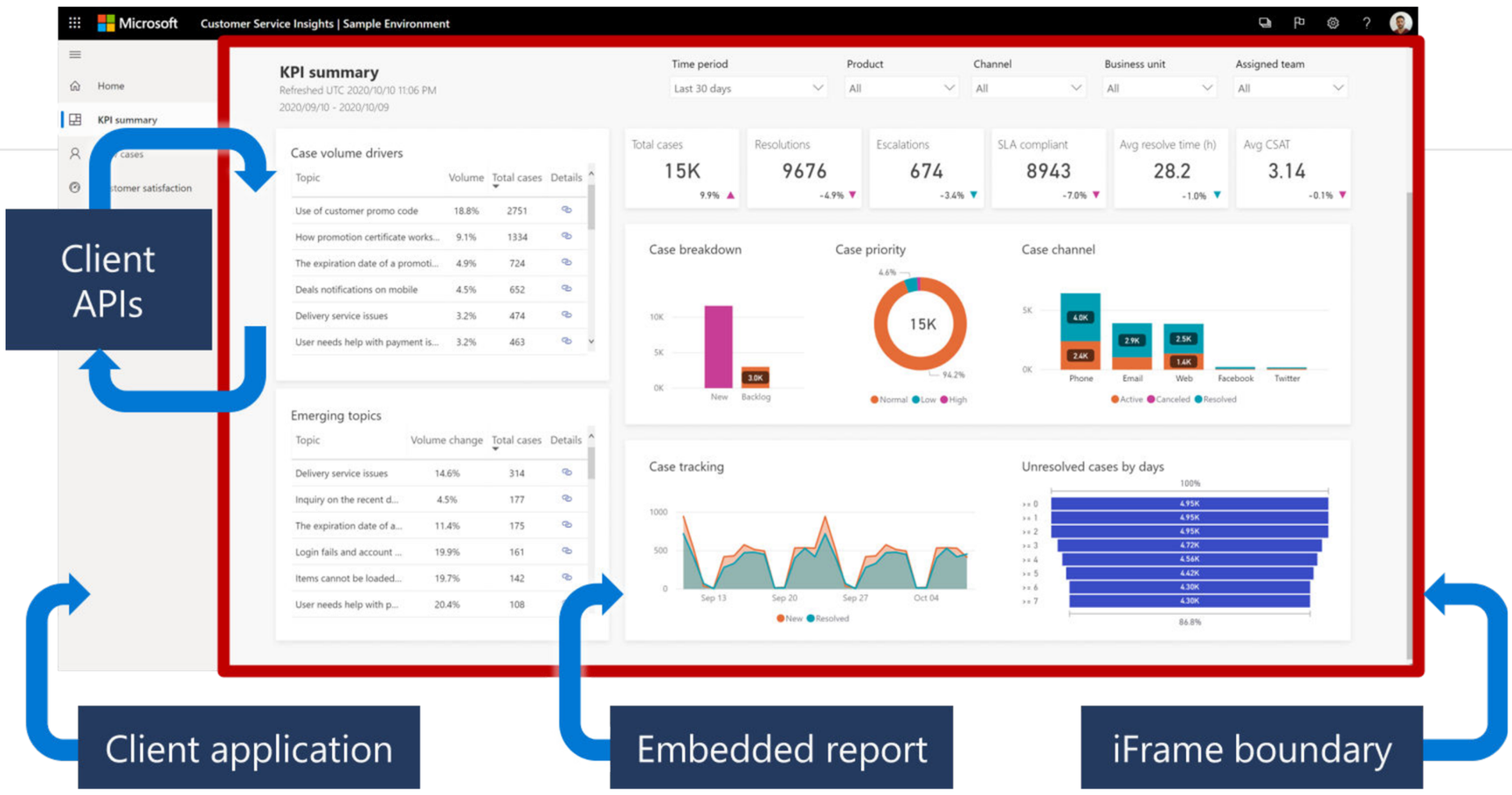
- Implement row-level security for different user roles in your dashboard.

🗓️ Project for the Day

- Choose any of the completed reports from the previous days.
- Implement row-level security in your dashboard to restrict data access based on user roles.
- Create multiple user roles (e.g., manager, employee) and define the data they should be able to access.

DAY 17

Exploring Power BI's API and Automation



🗂️ Resources for Learning

- Microsoft Learn: Automate Power BI REST API
- Power BI REST API documentation: Power BI REST API

🎯 Practice Questions

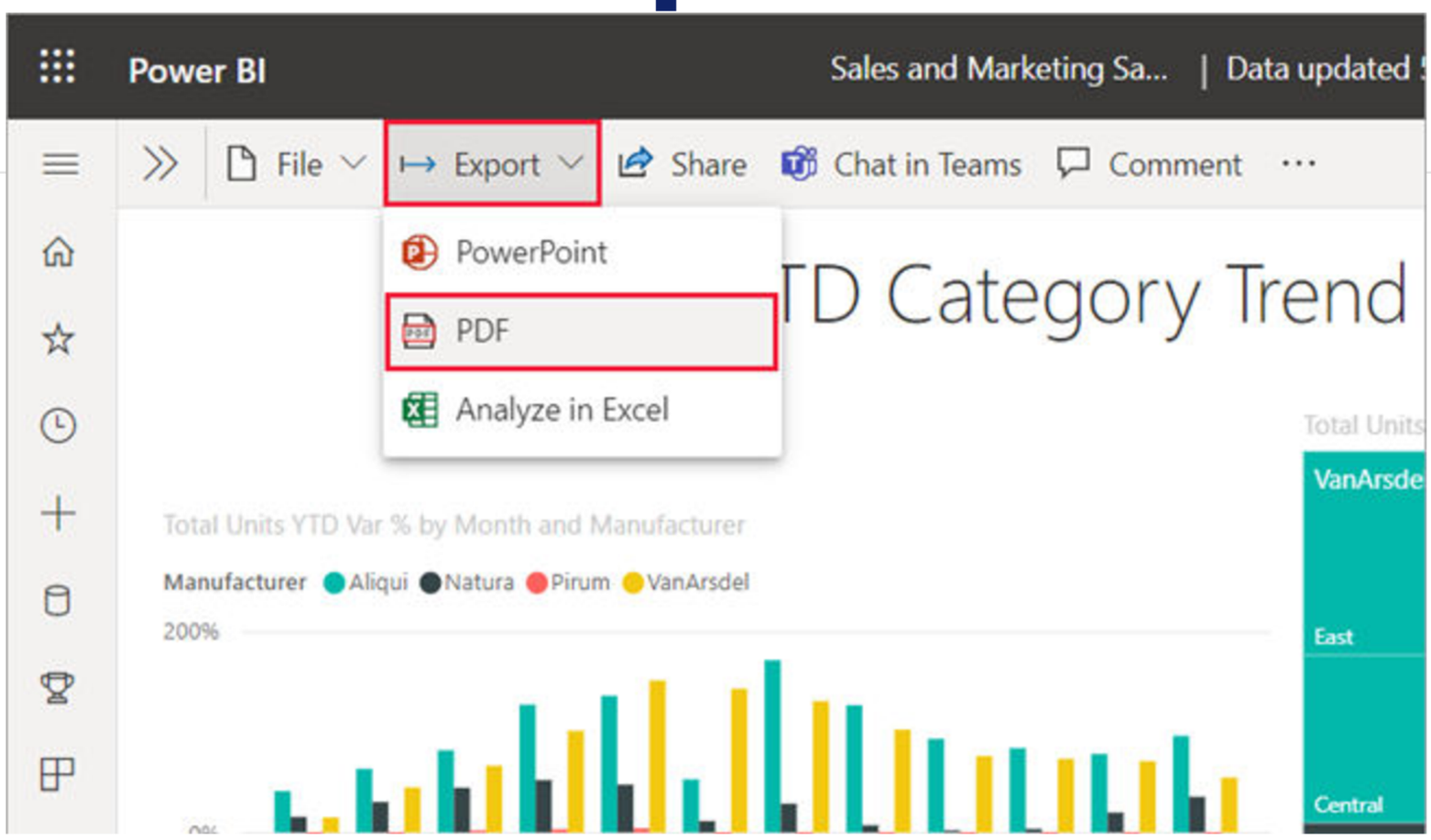
- Use Power BI API to automate a task, such as publishing a report or refreshing data.

🗓️ Project for the Day

- Use any of the completed reports from the previous days.
- Explore Power BI's API and create a simple script to automate a specific task related to report management.
- For example, you could write a script to schedule a report refresh using the API.

DAY 18

Learning about Power BI's Paginated Reports



🗂️ Resources for Learning

- Microsoft Learn: Create paginated reports in Power BI
- Power BI Blog: Introduction to Paginated Reports

🎯 Practice Questions

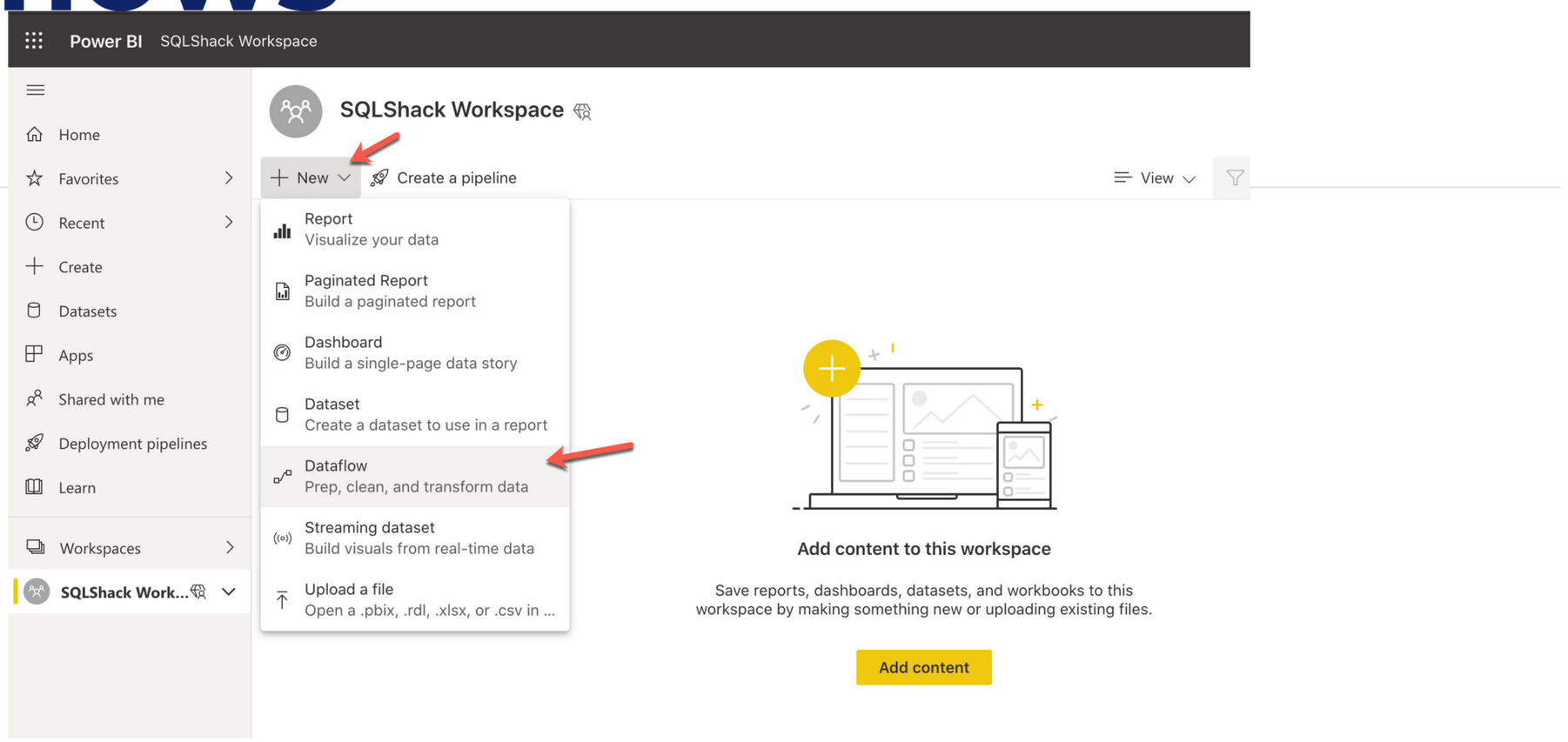
- Design a paginated report layout and export it to PDF or another format.

🗓️ Project for the Day

- Use any of the completed reports from the previous days.
- Create a paginated report that presents your data in a traditional, printable format.
- Add elements like tables, matrices, and charts to convey information effectively.

DAY 19

Learning about Power BI's Dataflows



🗂️ Resources for Learning

- Microsoft Learn: Introduction to Power BI dataflows
- Power BI Blog: Introduction to Dataflows

🎯 Practice Questions

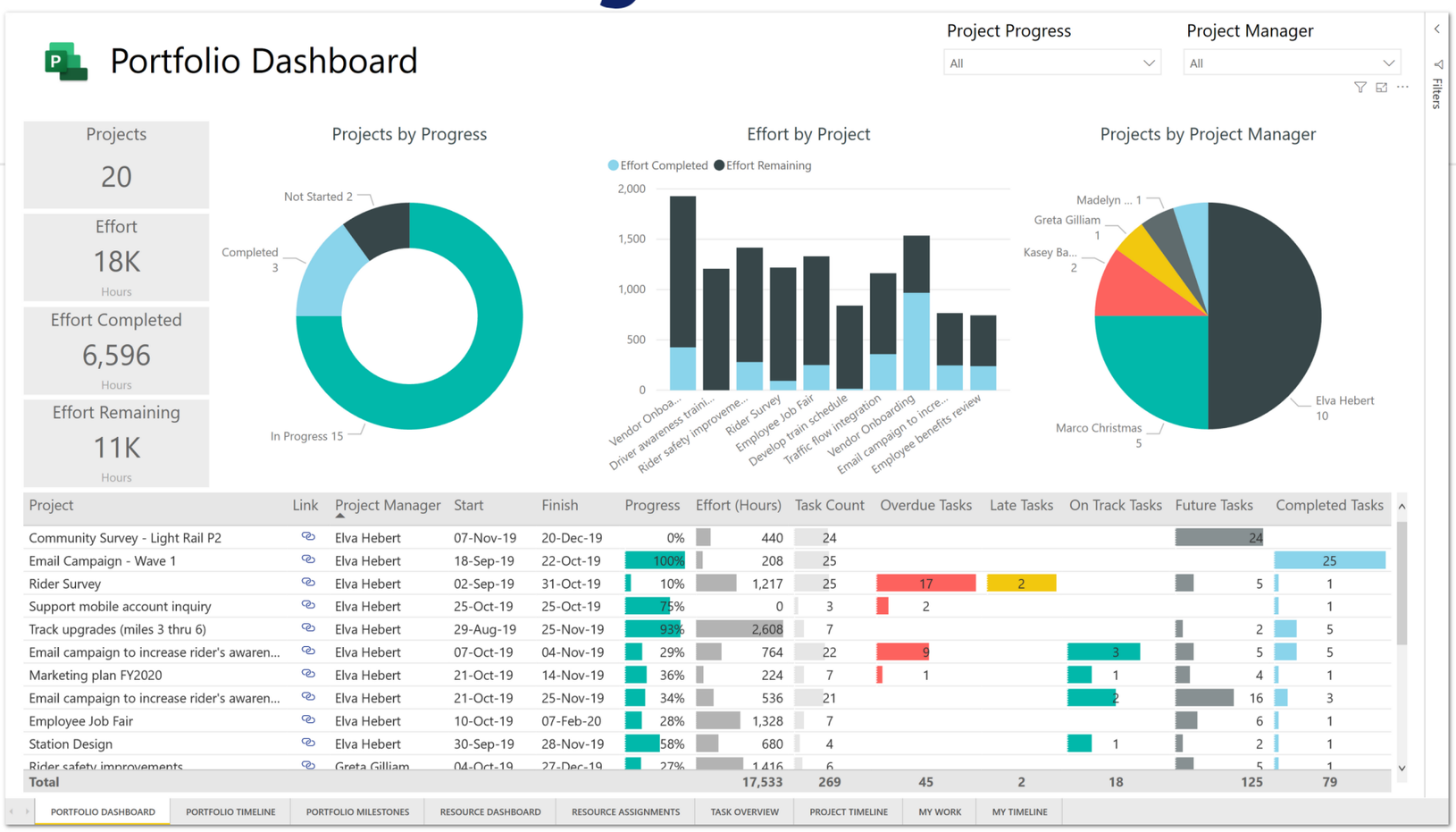
- Create a dataflow to extract, transform, and load data.

🗓️ Project for the Day

- Choose any of the completed reports from the previous days.
- Build a dataflow to extract data from a source, apply transformations, and load it into Power BI.
- Use the dataflow as a source for your report and explore the benefits of using dataflows.

DAY 20

Developing a Comprehensive Power BI Project


Portfolio Dashboard
Project Progress
All
Project Manager
All
Filters
Projects
20
Effort
18K
Hours
Effort Completed
6,596
Hours
Effort Remaining
11K
Hours
Projects by Progress
Not Started 2
Completed 3
In Progress 15
Effort by Project
Effort Completed
Effort Remaining
2,000
1,500
1,000
500
0
Vendor Onboa...
Driver awareness traini...
Rider safety improveme...
Rider Survey
Employee Job Fair
Develop train schedule
Traffic flow integration
Vendor Onboarding
Email campaign to incre...
Employee benefits review
Projects by Project Manager
Madelyn ... 1
Greta Gilliam 1
Kasey Ba... 2
Elva Hebert 10
Marco Christmas 5
Project | Link | Project Manager | Start | Finish | Progress | Effort (Hours) | Task Count | Overdue Tasks | Late Tasks | On Track Tasks | Future Tasks | Completed Tasks
Community Survey - Light Rail P2 | Elva Hebert | 07-Nov-19 | 20-Dec-19 | 0% | 440 | 24 | | | | 24 |
Email Campaign - Wave 1 | Elva Hebert | 18-Sep-19 | 22-Oct-19 | 100% | 208 | 25 | | | | | 25
Rider Survey | Elva Hebert | 02-Sep-19 | 31-Oct-19 | 10% | 1,217 | 25 | 17 | 2 | | 5 | 1
Support mobile account inquiry | Elva Hebert | 25-Oct-19 | 25-Oct-19 | 75% | 0 | 3 | 2 | | | | 1
Track upgrades (miles 3 thru 6) | Elva Hebert | 29-Aug-19 | 25-Nov-19 | 93% | 2,608 | 7 | | | | 2 | 5
Email campaign to increase rider's awaren... | Elva Hebert | 07-Oct-19 | 04-Nov-19 | 29% | 764 | 22 | 9 | | 3 | 5 | 5
Marketing plan FY2020 | Elva Hebert | 21-Oct-19 | 14-Nov-19 | 36% | 224 | 7 | 1 | | 1 | 4 | 1
Email campaign to increase rider's awaren... | Elva Hebert | 21-Oct-19 | 25-Nov-19 | 34% | 536 | 21 | | | 2 | 16 | 3
Employee Job Fair | Elva Hebert | 10-Oct-19 | 07-Feb-20 | 28% | 1,328 | 7 | | | | 6 | 1
Station Design | Elva Hebert | 30-Sep-19 | 28-Nov-19 | 58% | 680 | 4 | | | 1 | 2 | 1
Rider safety improvements | Greta Gilliam | 04-Oct-19 | 27-Dec-19 | 27% | 1,416 | 6 | | | | 5 | 1
Total | | | | | 17,533 | 269 | 45 | 2 | 18 | 125 | 79
PORTFOLIO DASHBOARD
PORTFOLIO TIMELINE
PORTFOLIO MILESTONES
RESOURCE DASHBOARD
RESOURCE ASSIGNMENTS
TASK OVERVIEW
PROJECT TIMELINE
MY WORK
MY TIMELINE

🗂️ Resources for Learning

- Microsoft Learn: Common Business Scenarios for Power BI
- Power BI Showcase: Power BI Showcase

🎯 Practice Questions

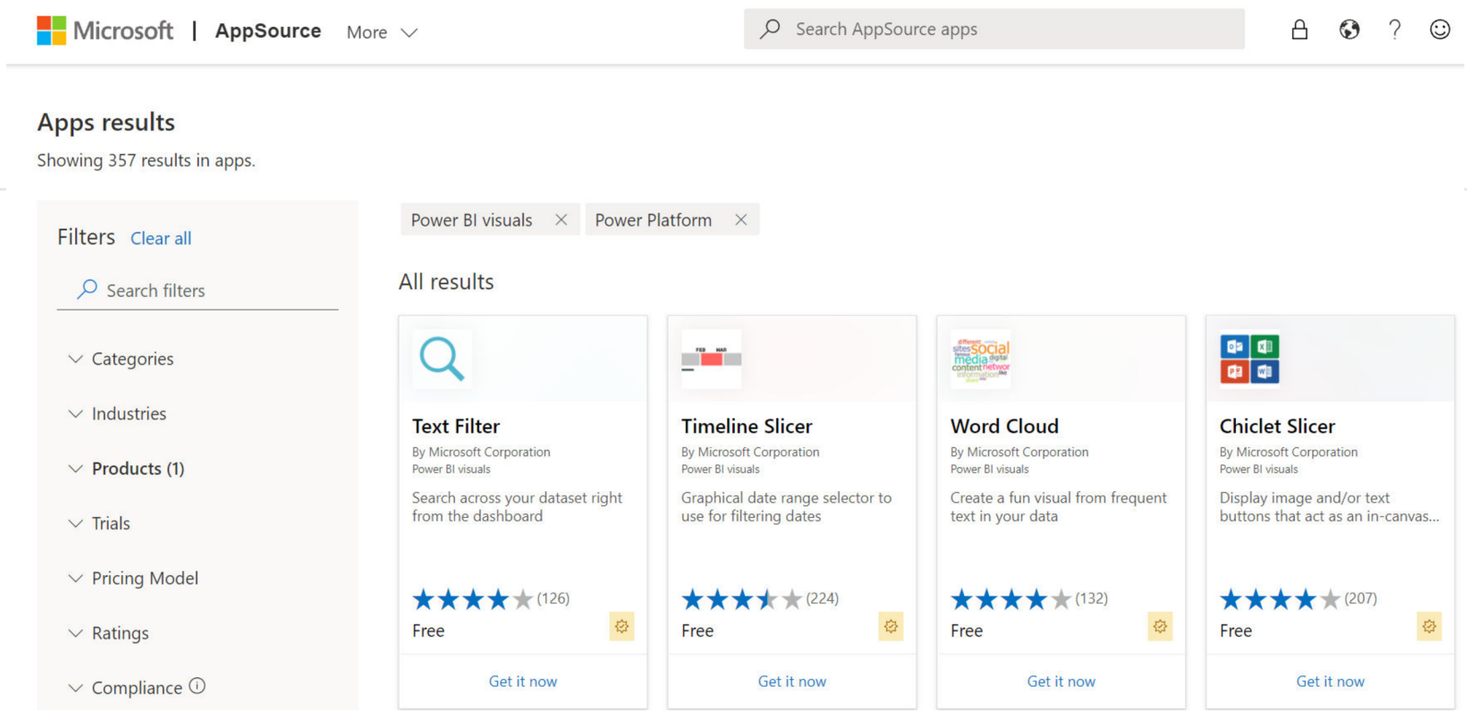
- Review and summarize the skills you've acquired throughout the previous days.
- Design a comprehensive Power BI project that showcases your abilities.

🗓️ Project for the Day

- Combine your knowledge from the previous projects to create a comprehensive Power BI report.
- Select a relevant business scenario (e.g., sales analysis, financial reporting) and design a complete dashboard.
- Clean, transform, and model the data to support your chosen scenario.

DAY 21

Advanced Visualization Techniques



🗂️ Resources for Learning

- Microsoft Learn: Advanced visualization techniques
- Power BI Blog: Custom Visuals Gallery

🎯 Practice Questions

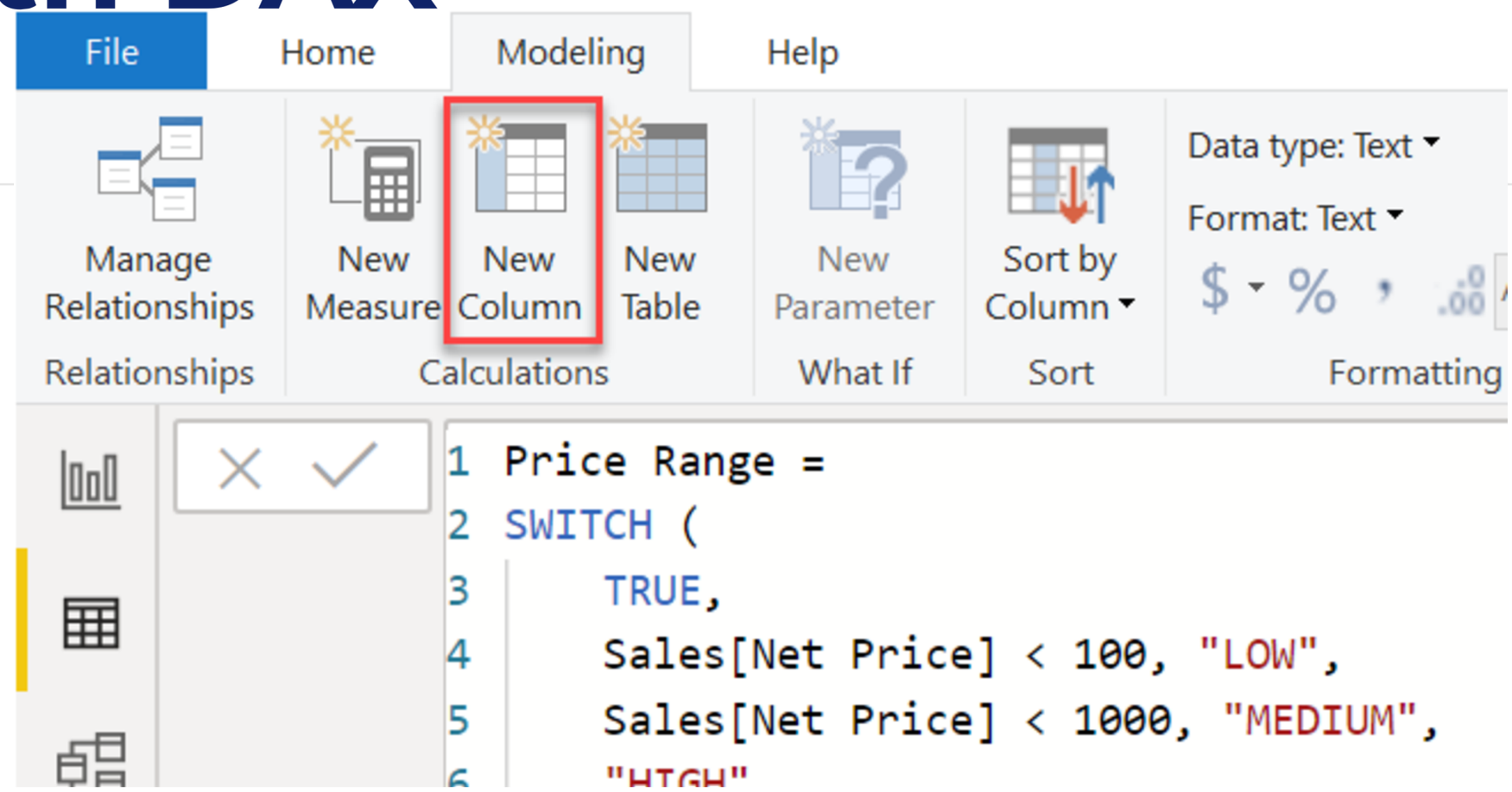
- Experiment with custom visuals from the Power BI marketplace.
- Use advanced visualization techniques like drill-through actions, custom tooltips, etc.

🗓️ Project for the Day

- Choose any of the completed reports from the previous days.
- Enhance your report with advanced visualizations, such as custom visuals, drill-through actions, and slicers.
- Explore the Power BI marketplace to find and incorporate custom visuals that suit your project.

DAY 22

Advanced Data Analysis with DAX



🗂️ Resources for Learning

- Microsoft Learn: Advanced data analysis with DAX
- Power BI Community Blog: Advanced DAX Techniques

🎯 Practice Questions

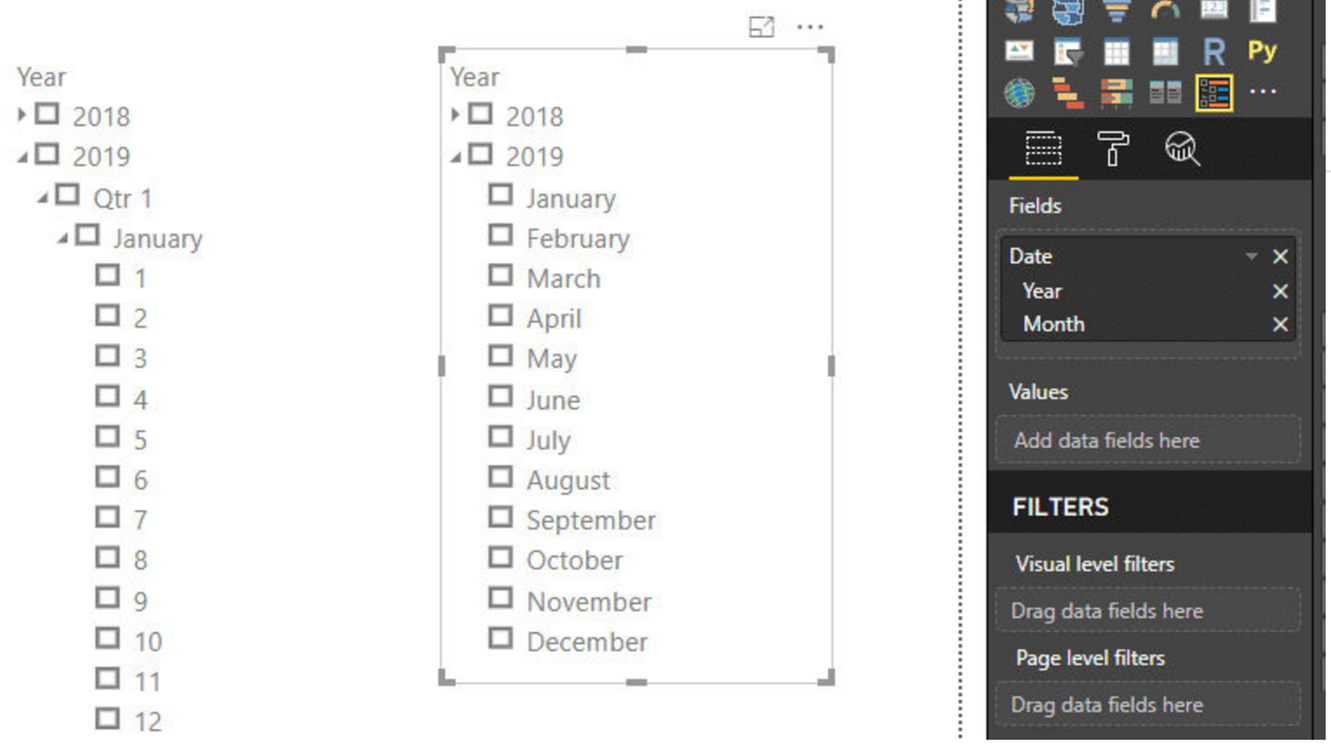
- Write complex DAX calculations involving time intelligence, advanced filtering, etc.
- Use functions like CALCULATE, FILTER, and ALL to create advanced measures.

🗓️ Project for the Day

- Choose any of the completed reports from the previous days.
- Enhance your report with advanced DAX calculations, such as calculating growth rates, moving averages, etc.
- Implement advanced filtering and time intelligence functions to gain deeper insights.

DAY 23

Advanced Data Modeling and Relationships



🗂️ Resources for Learning

- Microsoft Learn: Advanced data modeling in Power BI
- DAX Patterns: Advanced Data Modeling Patterns

🎯 Practice Questions

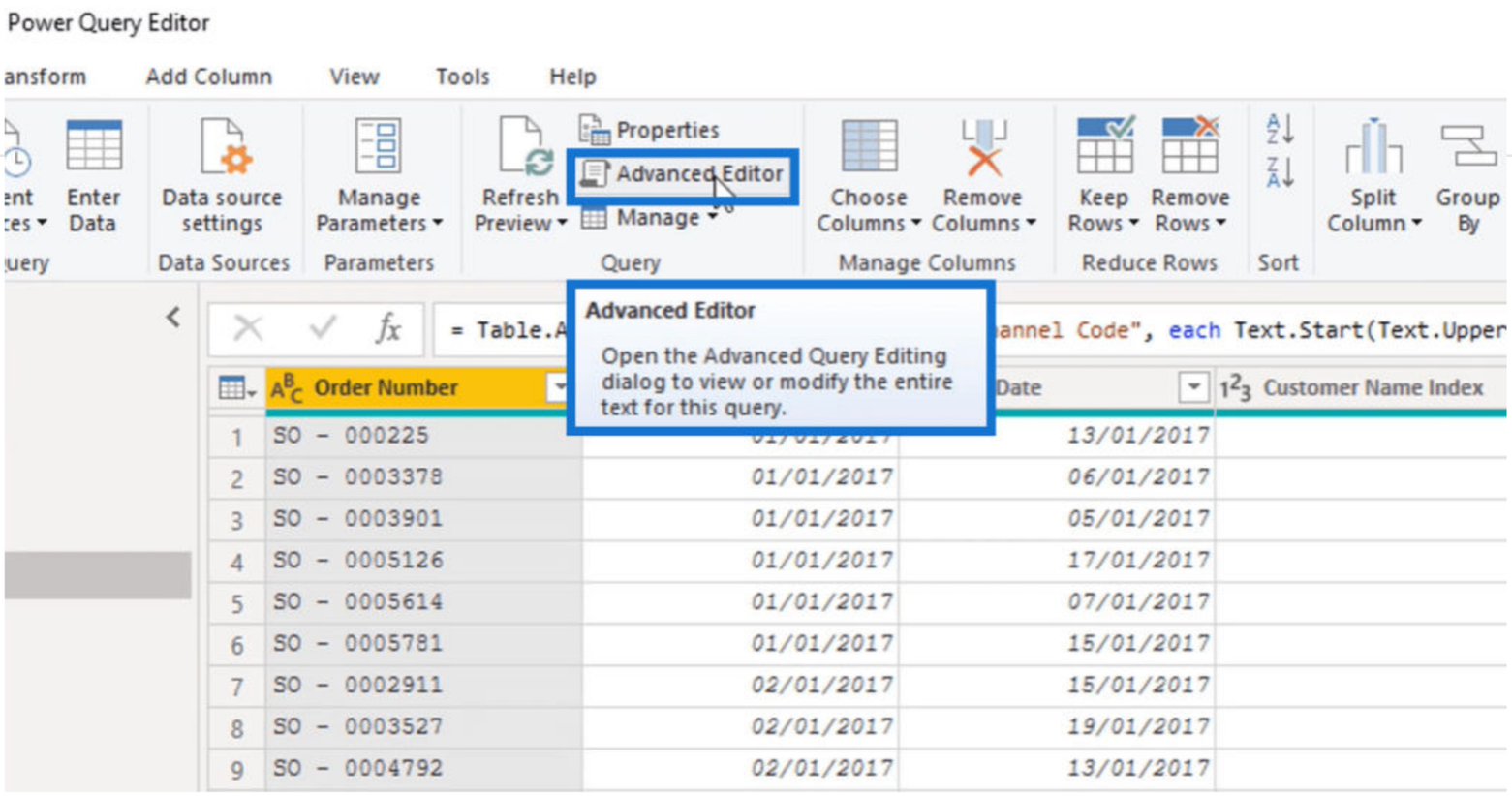
- Implement advanced relationships like bidirectional relationships and complex hierarchies.
- Create complex calculated tables using DAX.

🗓️ Project for the Day

- Choose any of the completed reports from the previous days.
- Implement advanced data modeling techniques, such as bidirectional relationships or complex hierarchies.
- Create calculated tables using DAX to support your project's analytical requirements.

DAY 24

Advanced Data Transformation with Power Query



🗂️ Resources for Learning

- Microsoft Learn: Advanced Power Query M formulas
- Power Query M Function Reference: M Function Reference

🎯 Practice Questions

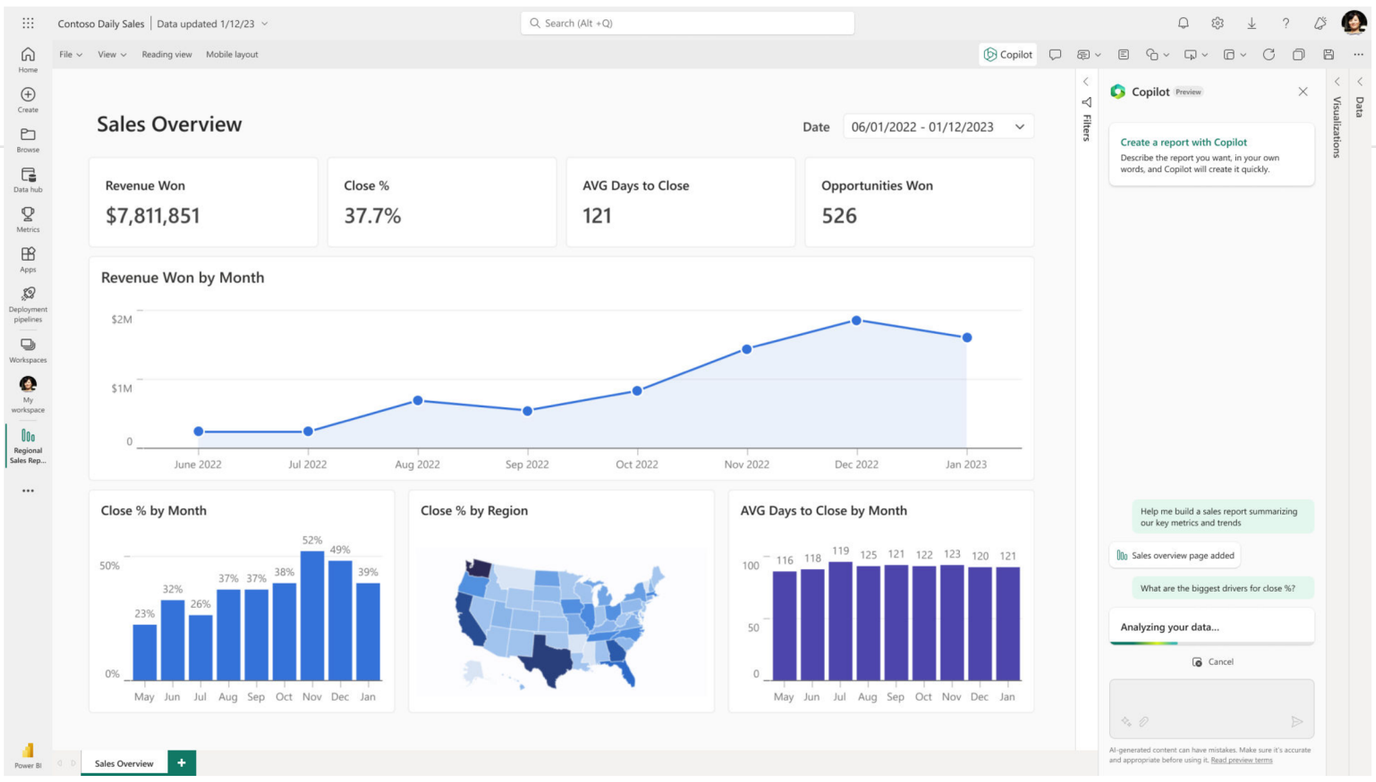
- Write complex Power Query M formulas to perform advanced data transformations.
- Combine multiple queries using advanced merging techniques.

🗓️ Project for the Day

- Choose any of the completed reports from the previous days.
- Apply advanced data transformation techniques using Power Query M.
- Combine multiple queries using advanced merging techniques like merging queries based on multiple columns.

DAY 25

Data Visualization Best Practices


Contoso Daily Sales | Data updated 1/12/23
Search (Alt +Q)
File View Reading view Mobile layout
Copilot
Sales Overview
Date 06/01/2022 - 01/12/2023
Revenue Won
$7,811,851
Close %
37.7%
AVG Days to Close
121
Opportunities Won
526
Revenue Won by Month
$2M
$1M
0
June 2022 Jul 2022 Aug 2022 Sep 2022 Oct 2022 Nov 2022 Dec 2022 Jan 2023
Close % by Month
50%
0%
23% 32% 26% 37% 37% 38% 52% 49% 39%
May Jun Jul Aug Sep Oct Nov Dec Jan
Close % by Region
AVG Days to Close by Month
100
50
0
116 118 119 125 121 122 123 120 121
May Jun Jul Aug Sep Oct Nov Dec Jan
Copilot Preview
Create a report with Copilot
Describe the report you want, in your own words, and Copilot will create it quickly.
Help me build a sales report summarizing our key metrics and trends
Sales overview page added
What are the biggest drivers for close %?
Analyzing your data...
Cancel
AI-generated content can have mistakes. Make sure it's accurate and appropriate before using it. Read preview terms
Filters
Visualizations
Data
Power BI
Sales Overview

📁 Resources for Learning

- Microsoft Learn: Data visualization best practices
- Power BI Blog: Data Visualization Tips

🎯 Practice Questions

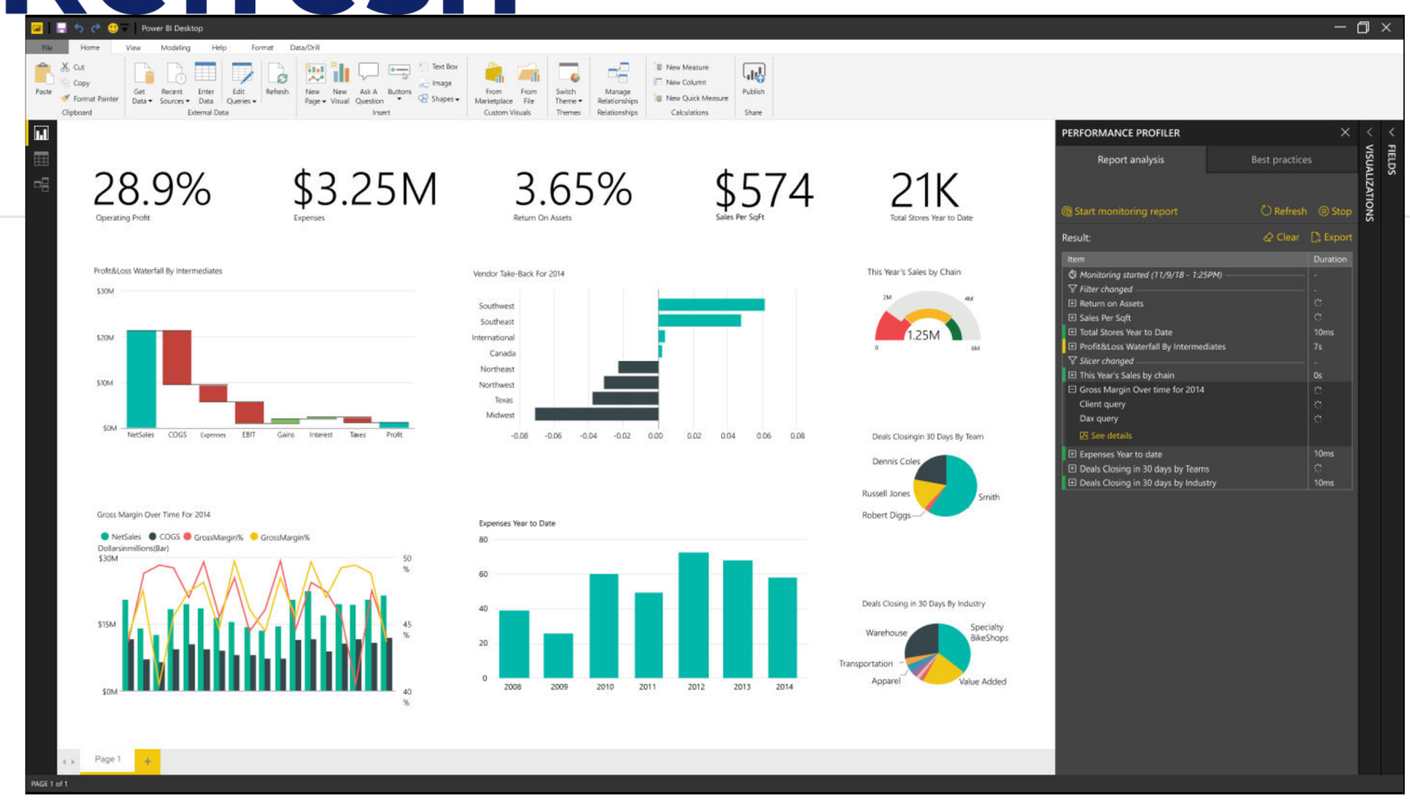
- Apply data visualization best practices, such as avoiding chart junk, choosing appropriate chart types, etc.

🗓️ Project for the Day

- Choose any of the completed reports from the previous days.
- Review and refine your visualizations based on data visualization best practices.
- Ensure that your visualizations effectively convey insights without clutter or confusion.

DAY 26

Performance Optimization and Data Refresh



🗂️ Resources for Learning

- Microsoft Learn: Optimize Power BI report performance
- Microsoft Learn: Optimize data refresh in Power BI

🎯 Practice Questions

- Apply techniques to optimize report performance and minimize data refresh time

🗓️ Project for the Day

- Choose any of the completed reports from the previous days.
- Implement performance optimization techniques to ensure your report loads quickly and responds smoothly.
- Explore ways to optimize data refresh schedules and improve efficiency.

DAY 27

Creating Dynamic Reports with Power BI

📁 Resources for Learning

- Microsoft Learn: Create dynamic reports with Power BI
- YouTube Tutorial: Creating Dynamic Reports in Power BI

🎯 Practice Questions

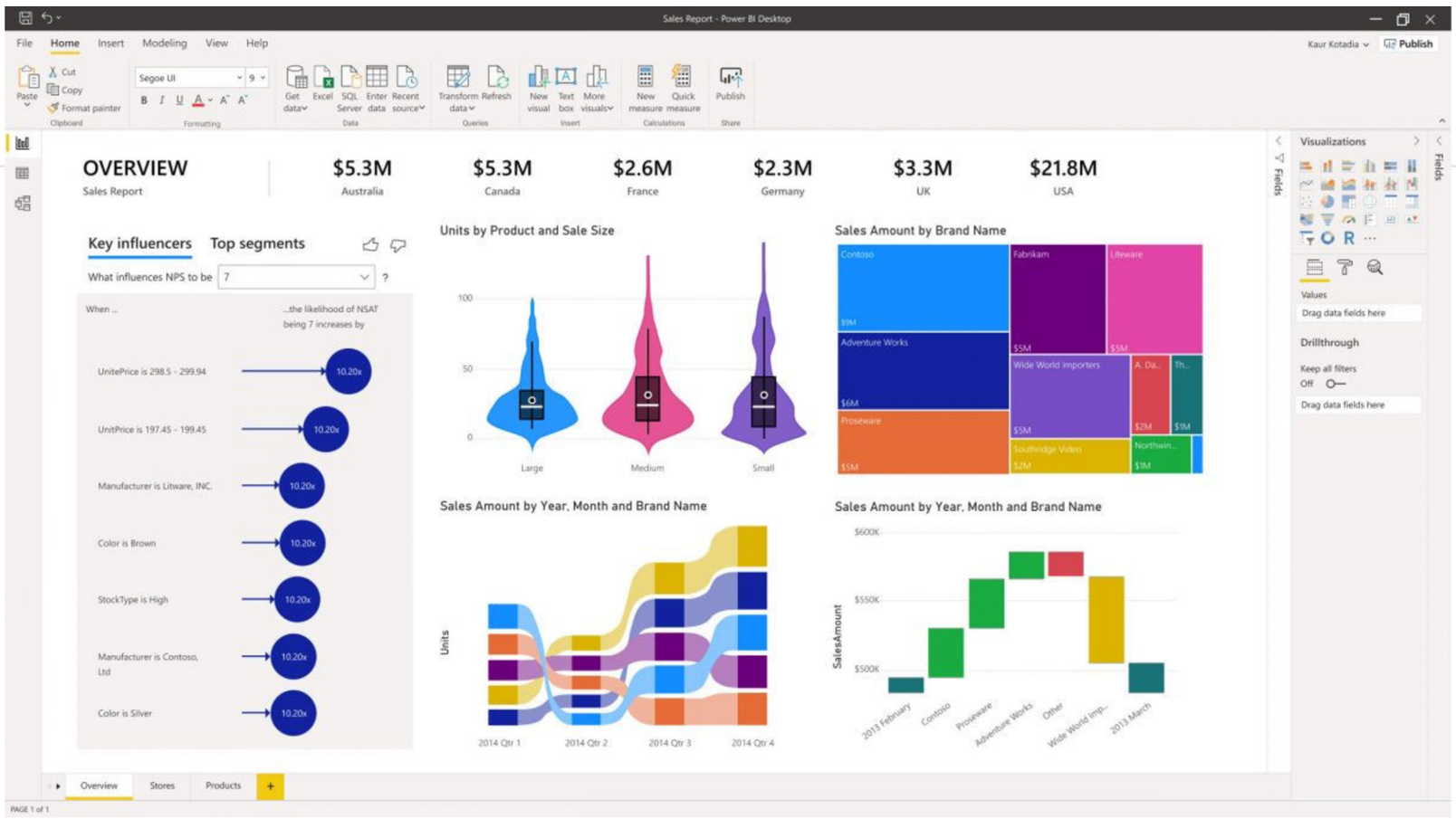
- Create dynamic report elements using features like bookmarks, buttons, and drill-through actions.

🗓️ Project for the Day

- Choose any of the completed reports from the previous days.
- Create a dynamic report experience using bookmarks, buttons, and drill-through actions.
- Allow users to interactively explore the data and focus on specific insights.

DAY 28

Advanced Data Analysis with Python



🗂️ Resources for Learning

- Microsoft Learn: Python integration in Power BI
- Python for Data Analysis: Python for Data Analysis

🎯 Practice Questions

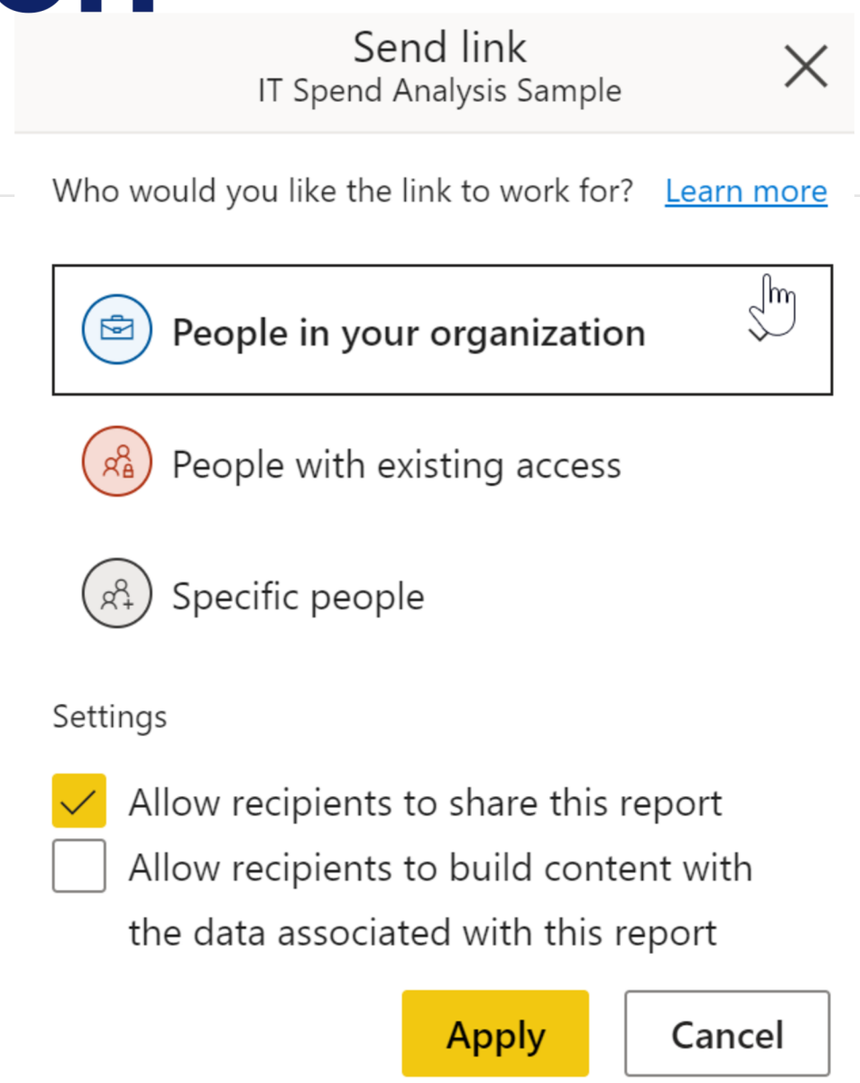
- Write advanced Python scripts to perform complex data analysis tasks within Power BI.

🗓️ Project for the Day

- Choose any of the completed reports from the previous days.
- Incorporate advanced Python scripts into your report to perform complex data analysis tasks.
- Use libraries like Pandas, NumPy, or SciPy to enhance your analysis.

DAY 29

Report Distribution and Collaboration


Send link
IT Spend Analysis Sample
Who would you like the link to work for? Learn more
People in your organization
People with existing access
Specific people
Settings
Allow recipients to share this report
Allow recipients to build content with the data associated with this report
Apply
Cancel

🗂️ Resources for Learning

- Microsoft Learn: Distribute and collaborate on Power BI reports
- Power BI Blog: Collaboration Features in Power BI

🎯 Practice Questions

- Share your report with others and collaborate on a shared dashboard.

🗓️ Project for the Day

- Choose any of the completed reports from the previous days.
- Share your report with a colleague or team member, granting them appropriate access permissions.
- Collaborate on a shared dashboard, gather feedback, and iterate on improvements.

DAY 30

Final Project Showcase and Review

🗂️ Resources for Learning

- Power BI Community: Power BI Community
- Udemy: Power BI Courses

🎯 Practice Questions

- Review and summarize the skills you've developed over the past 30 days.
- Showcase your final Power BI project to peers, mentors, or online communities.

🗓️ Project for the Day

- Use any of the completed reports from the previous days.
- Polish and finalize your comprehensive Power BI project.
- Share your project with your network, mentor, or online Power BI community for feedback and recognition.